

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Currently Amended) A modular molecular clasp comprising the general architecture of (N)- fluorophore effector1-single chain antibody domain 1 (scFv1)-transducer-scFv2- fluorophore effector2-(C), wherein the two single chain antibody domains scFv1 and scFv2 together forming a molecular recognition element (MRE) comprising a ligand binding site; ~~an effector; and a said~~ transducer linking conserved regions of the single chain antibody domains, and wherein ~~said modular molecular clasp is constructed such that allosteric alteration of said modular molecular clasp is facilitated~~ in response to ligand binding to said MRE, molecular recognition element, producing fluorophore effector1 and effector2 are juxtaposed to produce a detectable fluorescent change in an activity of said effector.
- 3-12. (Canceled)
13. (Currently Amended) The modular molecular clasp of claim 2 ~~claim 8~~, wherein said molecular recognition element comprises less than 50 amino acid residues.
14. (Currently Amended) The modular molecular clasp of claim 2 ~~claim 8~~, wherein said molecular recognition element comprises less than 25 amino acid residues.
- 15-17. (Canceled)
18. (Currently Amended) The modular molecular clasp of claim 2 ~~claim 15~~, wherein said molecular recognition element comprises a portion which is conserved among members of a protein superfamily.
19. (Original) The modular molecular clasp of claim 18, wherein said transducer links said conserved portions within said molecular recognition element.
20. (Currently Amended) The modular molecular clasp of claim 2 ~~claim 15~~, wherein said transducer comprises less than 20 amino acid residues.

21-22. (Canceled)

23. (Previously Presented) The modular molecular clasp of claim 2, wherein said transducer is operative with a plurality of distinct molecular recognition elements.

24. (Currently Amended) The modular molecular clasp of claim 2, wherein said effectors ~~are effector~~ is operative with a plurality of distinct transducers and a plurality of distinct molecular recognition elements.

25. (Canceled)

26. (Currently Amended) The modular molecular clasp of claim 2 ~~25~~, wherein said fluorophore is selected from green fluorescent protein or fluorescent variants thereof or DS Red.

27. (Currently Amended) The modular molecular clasp of claim 2 ~~25~~, wherein said fluorophore is a fluorescent label selected from: Alexa Fluor 350, Alexa Fluor 488, Alexa Fluor 532, Alexa Fluor 546, Alexa Fluor 568, Alexa Fluor 594, Alexa Fluor 633, Alexa Fluor 660 and Alexa Fluor 680, AMCA, AMCA-S, BODIPY FL, BODIPY R6G, BODIPY TMR, BODIPY TR, BODIPY 530/550, BODIPY 558/568, BODIPY 564/570, BODIPY 576/589, BODIPY 581/591, BODIPY 630/650, BODIPY 650/665, Carboxyrhodamine 6G, carboxy-X-rhodamine (ROX), Cascade Blue, Cascade Yellow Cy3, Cy5, Cy3.5, Cy5 Dansyl, Dapoxyl, Dialkylaminocoumarin, 4',5'-Dichloro2',7'-dimethoxy-fluorescein, DM-NERF, Eosin, Erythrosin, Fluorescein, FAM, Hydroxycoumarin, IRD40, IRD 700, IRD 800, JOE, Lissamine rhodamine B, Marina Blue, Methoxycoumarin, Naphthiofluorescein, Oregon Green 488, Oregon Green 500, Oregon Green 514, Pacific Blue, PyMPO, Pyrene, Rhodamine 6G, Rhodamine Green, Rhodamine Red, Rhodol Green, 2',4',5',7'-Tetra-bromosulfone-fluorescein, Tetramethyl-rhodamine (TMR), Carboxy-tetramethylrhodamine (TAMRA), Texas Red, Texas Red-X, squaraine dye Sq635, or squaraine dye Sq660.

28. (Currently Amended) The modular molecular clasp of claim 2 ~~25~~, wherein said fluorophore effectors support effector ~~comprises a fluorophore that supports~~ Fluorescence Resonance Energy Transfer (FRET).

29. **(Currently Amended)** The modular molecular clasp of claim 2 ~~25~~, wherein said fluorophore effectors support ~~effector comprises a fluorophore that supports~~ fluorescence quenching.
30. **(Currently Amended)** The modular molecular clasp of claim 2 ~~25~~, wherein one of said fluorophore effectors comprises ~~effector comprises a fluorophore and~~ a bioluminescent protein, the combined use of which with the other fluorophore effector supports Bioluminescence Resonance Energy Transfer.
31. **(Canceled)**
32. **(Previously Presented)** The modular molecular clasp of claim 2, wherein said molecular recognition element is from a naturally occurring polypeptide.
33. **(Previously Presented)** The modular molecular clasp of claim 2, wherein said molecular recognition element is a non-naturally occurring (artificial) polypeptide.
- 34-35. **(Canceled)**
36. **(Previously Presented)** The modular molecular clasp of claim 2, wherein said molecular recognition element comprises a V_H chain specific for a ligand of interest, or a portion thereof.
37. **(Previously Presented)** The modular molecular clasp of claim 2, wherein said molecular recognition element comprises a V_L chain specific for a ligand of interest, or a portion thereof.
38. **(Previously Presented)** The modular molecular clasp of claim 2, wherein molecular recognition element comprises about 1-220 amino acid residues.
39. **(Previously Presented)** The modular molecular clasp of claim 2, wherein molecular recognition element comprises about 1-150 amino acid residues.
40. **(Currently Amended)** The modular molecular clasp of claim 2, ~~farther~~ further comprising a fusion partner domain.

41. **(Original)** The modular molecular clasp of claim 40, wherein said fusion partner domain is a targeting sequence which localizes said modular molecular clasp to an intracellular compartment.
42. **(Original)** The modular molecular clasp of claim 40, wherein said fusion partner domain is a targeting sequence which localizes said modular molecular clasp to a cellular membrane.
43. **(Original)** The modular molecular clasp of claim 40, wherein said fusion partner domain is suitable for immobilizing said modular molecular clasp on a solid surface.
44. **(Original)** The modular molecular clasp of claim 40, wherein said fusion partner domain facilitates purification or isolation of said modular molecular clasp.
45. **(Original)** The modular molecular clasp of claim 40, wherein said fusion partner domain is capable of modifying the solubility of the modular molecular clasp.
- 46-69. **(Canceled)**.